

CLAIMS:

1. A data processing system including a plurality of processing units and control means for controlling operations of said processing units, such that each processing unit initiates processing assigned thereto, in response to reception of an execution enable signal sent from the control means, and after execution of the processing, each processing unit sends a processing result and an execution end signal to the control means, wherein

said control means has a processing table for each application, said processing table storing, in a predetermined order, identification information on one or more processing units to which the execution enable signal is to be sent, and identification information on one or more processing units from which the processing result and the execution end signal are to be received, whereby, in response to receipt of a processing request from an application, the execution enable signal is sent to said one or more processing units and the processing result and the execution end signal are received from said one or more processing units, in the order determined by the corresponding processing table for said application.

2. The system according to claim 1, wherein said processing units cooperate with one another to create frame image data with respect to divided images of a predetermined image, and output the created frame image data as said processing results.

3. The system according to claim 1, wherein
each of said processing units includes drawing processing means for drawing a predetermined image, a plurality of geometry processing means for performing geometry processing on the basis of predetermined image display instructions, and an image interface which intervenes

between said drawing processing means and said geometry processing means, and

said drawing processing means includes a buffer for storing, together with identification information, drawing contexts that are different in the contents from one another for each of said geometry processing means, and means for reading a specific drawing context from said buffer in response to input of a drawing instruction from said image interface and drawing an image based on the read drawing context, such that

each of said geometry processing means performs geometry processing independently on the basis of the image display instructions and sends to said image interface an image transfer request containing the identification information on the drawing context acquired as a result of the geometry processing together with information indicative of priority given thereto, and

said image interface receives the image transfer requests from said geometry processing means in the order of priority to sequentially input the drawing instructions to said drawing processing means, whereby

a result of the image drawing performed by said drawing processing means is output as said processing result.

4. The system according to claim 3, further comprising means for displaying the results of the image drawing respectively performed by the processing units, on one display screen at the same time.

5. The system according to claim 3, further comprising means for displaying the results of the image drawing respectively performed by the processing units, on one display screen in sequence.

6. A data processing system comprising:

M first arbitrator means (where M is a natural

number greater than one) each for arbitrating operations of corresponding N processing units (where N is a natural number greater than one), said N processing units cooperating to perform cooperative processing, second arbitrator means for arbitrating operations of the M first arbitrator means, and control means for controlling operations of the first and second arbitrator means, such that each processing unit initiates processing assigned thereto, in response to reception of an execution enable signal sent from the control means, and after execution of the processing, each processing unit sends a processing result and an execution end signal to the control means, wherein

said control means has a processing table for each application, said processing table storing, in a predetermined order, identification information on one or more processing units to which the execution enable signal is to be sent, and identification information on one or more processing units from which the processing result and the execution end signal are to be received, whereby, in response to receipt of a processing request from an application, the execution enable signal is sent to said one or more processing units and the processing result and the execution end signal are received from said one or more processing units, in the order determined by the corresponding processing table for said application.

7. The system according to claim 6, wherein said processing units cooperate with one another to create frame image data with respect to divided images of a predetermined image, and output the created frame image data as said processing results.

8. The system according to claim 6, wherein each of said processing units includes drawing processing means for drawing a predetermined image, a

plurality of geometry processing means for performing geometry processing on the basis of predetermined image display instructions, and an image interface which intervenes between said drawing processing means and said geometry processing means, and

said drawing processing means includes a buffer for storing, together with identification information, drawing contexts that are different in the contents from one another for each of said geometry processing means, and means for reading a specific drawing context from said buffer in response to input of a drawing instruction from said image interface and drawing an image based on the read drawing context, such that

each of said geometry processing means performs geometry processing independently on the basis of the image display instructions and sends to said image interface an image transfer request containing the identification information on the drawing context acquired as a result of the geometry processing together with information indicative of priority given thereto, and

said image interface receives the image transfer requests from said geometry processing means in the order of priority to sequentially input the drawing instructions to said drawing processing means, whereby

a result of the image drawing performed by said drawing processing means is output as said processing result.

9. The system according to claim 8, further comprising means for displaying the results of the image drawing respectively performed by the processing units, on one display screen at the same time.

10. The system according to claim 8, further comprising means for displaying the results of the image drawing respectively performed by the processing units, on one

display screen in sequence.

11. A data processing system for controlling operations of a plurality of processing units, such that each processing unit initiates processing assigned thereto, in response to reception of an execution enable signal, and after execution of the processing, each processing unit outputs a processing result and an execution end signal, said system comprising:

first means for holding a processing table for each application, said processing table storing, in a predetermined order, identification information on one or more processing units to which the execution enable signal is to be sent, and identification information on one or more processing units from which the processing result and the execution end signal are to be received;

second means for, in response to receipt of a processing request from an application, identifying a corresponding processing table for said application; and

third means for sending the execution enable signal to said one or more processing units and receiving the processing result and the execution end signal from said one or more processing units, in the order determined by the identified processing table.

12. The system according to claim 11, wherein each of said processing units is a computer having a communication capability, whereby

the execution enable signal and the execution end signal are exchanged with respect to at least said processing units through a computer network.

13. A data processing system for controlling operations of M first arbitrator means (where M is a natural number greater than one) each for arbitrating operations of corresponding N processing units (where N is a natural number greater than one), said N processing units cooperating to

perform cooperative processing, and an operation of second arbitrator means for arbitrating the operations of the M first arbitrator means, such that each processing unit initiates processing assigned thereto, in response to reception of an execution enable signal, and after execution of the processing, each processing unit outputs a processing result and an execution end signal, said system comprising:

first means for holding a processing table for each application, said processing table storing, in a predetermined order, identification information on one or more processing units to which the execution enable signal is to be sent, and identification information on one or more processing units from which the processing result and the execution end signal are to be received;

second means for, in response to receipt of a processing request from an application, identifying a corresponding processing table for said application; and

third means for sending the execution enable signal to said one or more processing units and receiving the processing result and the execution end signal from said one or more processing units, in the order determined by the identified processing table.

14. The system according to claim 13, wherein each of said processing units is a computer having a communication capability, whereby

the execution enable signal and the execution end signal are exchanged with respect to at least said processing units through a computer network.

15. A data processing method for controlling a plurality of processing units each initiating processing assigned thereto, in response to reception of an execution enable signal, and after execution of the processing, each outputting a processing result and an execution end signal,

so that the processing results from part of or all of said processing units are displayed on a display unit, said method comprising the steps of:

setting, in a predetermined order for each application, identification information on one or more processing units to which the execution enable signal is to be sent, and identification information on one or more processing units from which the processing result and the execution end signal are to be received;

sending, in response to receipt of a processing request from an application, the execution enable signal to said one or more processing units and receiving the processing result and the execution end signal from said one or more processing units, in the order determined for said application; and

displaying the received processing result at a predetermined timing on said display unit.

16. A computer program for causing a computer to operate as a data processing system which controls operations of a plurality of processing units each initiating processing assigned thereto, in response to reception of an execution enable signal, and after execution of the processing, each outputting a processing result and an execution end signal, said data processing system comprising:

first means for holding a processing table for each application, said processing table storing, in a predetermined order, identification information on one or more processing units to which the execution enable signal is to be sent, and identification information on one or more processing units from which the processing result and the execution end signal are to be received;

second means for, in response to receipt of a processing request from an application, identifying a

corresponding processing table for said application; and

third means for sending the execution enable signal to said one or more processing units and receiving the processing result and the execution end signal from said one or more processing units, in the order determined by the identified processing table.

17. A computer-readable recording medium recording the computer program according to claim 11.

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